The MT Laboratory Sentinel

Updates from the MT Laboratory Services Bureau
http://healthlab.hhs.mt.gov/ **12/11/09**

World AIDS Day

"Universal Access and Human Rights"

According to Laurie Kops of the HIV/STD Section for the Montana Department of Public Health and Human Services, "World AIDS Day brings awareness to a devastating disease that has taken lives from Montana communities, and continues to debilitate the lives of those living with HIV and their families. Within these communities, individuals are working tirelessly to open doors to healthcare services, and to alleviate the stigma and discrimination surrounding HIV".

"There are many lessons we need to hand to our future generations regarding HIV, but I think the greatest lesson is only when we accept others for who and what they are, will we have a light at the end of the HIV tunnel".

In Montana, 429 people are living with HIV or AIDS. That number includes two children and 53 people over 49 years of age. More than one-million Americans are currently living with HIV or AIDS. Approximately 56,000 Americans are infected with HIV each year and half of them are teenagers.

For more information call Laurie Kops at 406-444-2457 or 406-439-1821.

New HIV Infections in Decline

The estimated number of new HIV infections each year has declined about 17 percent since 2001, but for every five people infected, only two begin treatment, according to a report from the World Health Organization and UNAIDS.

About 2.7 million people were newly infected with the virus that causes AIDS last year, compared with about 3.3 million in 2001 — although direct comparisons are difficult because the numbers are counted differently now. Los Angeles Times

http://www.latimes.com/news/nation-and-world/la-sci-aids25-2009nov25,0,693454.story

MTPHL Influenza Testing Update:

The Montana Public Health Laboratory Website is updated weekly with Influenza statistics.

For complete testing numbers visit the following link, select the workload spreadsheet: http://www.dphhs.mt.gov/PHSD/Lab/environ-lab-index.shtml

Timely Reporting and Isolate Submission Can Help Expedite Enteric Illness Investigations

Combined, *Salmonella* and *Escherichia coli* O157:H7 are the leading causes of bacterial enteric illness in the United States. It was estimated that in 2007, there were 1.4 million cases of salmonellosis and 74,000 cases of *E. coli* O157 that accounted for 3.1 billion dollars in lost productivity and medical costs (USDA-ERS, 2007). The genetic diversity harbored within these pathogens; complexities in food production, distribution, and preparations; and bacterial transmission through human to animal contact have made tracking sources of illness extremely challenging. Often times, the crux of a successful investigation relies on an accurate exposure history collected from ill persons. However, if too much time has passed between illness onset and an exposure history interview, recalling past food and beverage consumption and animal contact can be difficult. Identification of an outbreak source requires interdisciplinary teams of public health experts working together in a timely manner.

Because enteric illness outbreak investigations are typically slow, lag times of several days to several weeks can exist between patient illness onset date and the realization of a disease cluster or outbreak. These lag times can be attributed to the methodology associated with pathogen isolation, confirmation, and pulsed-field gel electrophoresis (PFGE) typing, and the need for isolates to change hands between each test. By the time a patient visits a healthcare facility, a pathogen is isolated and confirmed, and PFGE is performed to match common DNA patterns, it is often too late to collect accurate exposure histories from the affected persons. Until more timely methods of linking cases to one another are developed, it is critical that each step taken to detect and confirm an enteric illness case is handled as expeditiously as possible.

Despite these difficulties, steps can be taken to help minimize the time lapse between illness onset and patient interviews. Remember to report any enteric pathogen positive lab tests your local health department (LHD) immediately upon receiving results. The sooner the LHD knows of the case, the sooner an interview can be conducted. Immediately send *Salmonella, E. coli,* and *Shigella* cultures to the Montana Public Health Laboratory (MTPHL) for confirmation and PFGE typing so that related isolates may be identified. Two or more isolates matching by PFGE may signal an illness outbreak. Enteric pathogens do not observe geographic boundaries and Montanans frequently travel. Activity occurring in one county could be linked to a case detected in a different county, or even in another part of the country. The sooner these cases are identified, the more likely it is that a common infective source will be implicated and successful control measures established.

Jennifer Lowell, Ph.D. Epidemiologist
Vectorborne / Zoonotic / Enteric Diseases
MT Communicable Disease Epidemiology
406-444-4735

E.coli cluster Electron micrograph

"I stopped believing in Santa Claus when I was six. Mother took me to see him in a department store and he asked me for my autograph."
Shirley Temple

MT Communicable Disease Update as of 12/11/09

This newsletter is produced by the Montana Communicable Disease Epidemiology Program.
Questions regarding its content should be directed to 406.444.0273 (24/7/365).
http://cdepi.hhs.mt.gov

DISEASE INFORMATION

Summary – Week 47 & 48 – Ending 11/28/09 & 12/5/09 – Disease reports received at DPHHS during the reporting period November 22 – December 5, 2009 included the following:

- Vaccine Preventable Diseases: Pertussis (2), Varicella (9)
- Enteric Diseases: Campylobacteriosis (2), Cryptosporidiosis (1), Giardiasis (2), Salmonellosis (2)
- Other Conditions: Aseptic Meningitis (2)
- Travel Related Conditions: None

Measles??? Although it may seem like influenza is the only disease going around right now, we recently had a report of a rash that looked like measles. This particular rash turned out to be related to Group A Streptococcus. There are many rashes that may look like measles. Attached is a tool that may be useful for clinicians in distinguishing between rashes.

NOTE: The spreadsheets have multiple pages, each indicated by a tab in the bottom left corner. Tabs on the worksheet reflect the following: (1) vaccine preventable and enteric diseases YTD; (2) other communicable diseases; (3) cases just this week; (4) clusters and outbreaks; and (5) an STD summary.

THE "BUZZ"

Influenza

NEW! In patients who died from novel H1N1 flu, the virus damaged cells throughout the respiratory tract according to a study released by researchers from the National Institutes of Health (NIH) and the office of New York's medical examiner. Of the 34 fatal cases studied, evidence of secondary bacterial infection was seen in more than half. Also, 62% of deaths were among those 25 to 49 years old, 91% had underlying conditions, and 72% were obese. http://www3.niaid.nih.gov/news/newsreleases/2009/FluAutopsy.htm

During week 47 & 48 (11/22/09 – 12/5/09), influenza activity continued to decrease in the U.S. Activity is now widespread in 14 states. Nationally, the proportion of outpatient visits for influenza-like illness (ILI) was 2.7% which is above the national baseline of 2.3%. This is the sixth consecutive week of national decreases in ILI after four consecutive weeks of sharp increases. **NEW!** During week 48, 7.8% of all deaths reported through the 122-Cities Mortality Reporting System were due to pneumonia and influenza (P&I) which is above the epidemic threshold of 7.1%. Including week 48, P&I mortality has been above threshold for ten consecutive weeks. Ninety-nine percent of the influenza viruses identified so far continue to be 2009 H1N1 influenza A viruses. These viruses remain similar to the virus chosen for the 2009 H1N1 vaccine, and remain susceptible to the antiviral drugs oseltamivir and zanamivir with rare exception.

Influenza is unpredictable. Although the incidence of disease is decreasing, it's possible that other waves of influenza activity may occur – caused by either 2009 H1N1 viruses or regular seasonal flu viruses.

Even though influenza incidence is decreasing, persons in targeted groups who have not been vaccinated should get vaccinated!

UPDATE! **Activity in Montana** – Activity in Montana is at the **REGIONAL** level. There are still pockets of high activity in certain parts of the state; however, the number of PCR confirmed cases has dropped significantly. ***2009 influenza A (H1N1) continues to predominate - no other subtypes of influenza A are circulating at this time in Montana.*** Anyone with a rapid test positive for influenza A can be assumed to have 2009 influenza A (H1N1). *Negative rapid tests for influenza A do not necessarily mean the person does not have influenza; sensitivity for these tests varies.*

MT Public Health Laboratory Testing - http://www.dphhs.mt.gov/PHSD/Lab/environ-lab-index.shtml.
Questions about influenza testing? 406-444-5526 or 1-800-821-7284 and select extension 5526

MT Communicable Disease Update as of 12/11/09

NEW! **DO NOT send rapid test positive influenza A specimens to the MPHL for confirmation at this time.** We are currently assessing the positive predictive value of rapid tests and will provide guidance during the next 1-2 weeks regarding any changes to surveillance activities. *Please continue to send rapid test positive* ***influenza B*** *specimens to the MPHL for confirmation.*

IMPORTANT! **Hospitalized/Death Reporting** - *Please report all laboratory confirmed (PCR, rapid test, viral culture positive) hospitalized cases and deaths due to all types of influenza to the local health department who will then report to the state. Period of interest: August 30, 2009 – present.*

NEW! ***Hepatitis A Testing*** More providers are ordering hepatitis A virus total antibody tests (HAV Total Ab). This test measures both IgM and IgG and cannot be used to determine whether a person has *acute* hepatitis A. The only test that is diagnostic for acute hepatitis A is the hepatitis A virus IgM antibody (HAV IgM). The following table provides information on the interpretation of hepatitis A testing.

Interpretation of Hepatitis A Virus Serologic Results

	HAV IgM*	HAV Total Ab**
No infection or exposure	Neg	Neg
Acute infection	**Pos**	Pos
Past infection or immunization	Neg	Pos

* **Primary test – required or highly recommended**

** Secondary test – not required; may be desirable for assessment of past exposure or immunization

INFORMATION / ANNOUNCEMENTS

NEW! **New NIOSH Respirator 'One-Stop-Shop' Web Resource -** NIOSH has developed a new respirator web page containing information to identify NIOSH-approved respirators; how to obtain products; and how to use them. The page will be dynamic; information will be added as it becomes available.
http://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/RespSource.html

Influenza New Guidance - New guidance and information from the CDC related to influenza:
www.cdc.gov/h1n1flu/whatsnew.htm

NEW! Caring for Someone Sick at Home
http://www.cdc.gov/h1n1flu/homecare/
New guidance drops the previous recommendation that caregivers in close contact with a sick person use a face mask or N-95 disposable respirator. Instead, the CDC recommends that sick people use a face mask if they leave their designated sick room to go to the bathroom or the doctor. If a mask isn't available, the CDC recommends using a tissue to cover coughs and sneezes.

NEW! Podcast: 2009 H1N1 Information for Parents who have Children with High-Risk Medical Conditions
http://www2c.cdc.gov/podcasts/player.asp?f=393367

Appropriate Use of Antibiotics - During the winter cold and influenza season, the chance that antibiotics will be used inappropriately is increased. The Colorado Get Smart program has a *free on-line CE program*, *Improving Appropriate Antibiotic Prescribing for Acute Respiratory Infections,* for primary care clinicians, nurses and pharmacists designed to help increase appropriate antibiotic use in the community setting.
http://www.getsmartcolorado.com/08course.htm